

# **Office of the State Fire Marshal**

## **Trench Rescue Operations**

### **Course Objectives**

- 48-1** Members shall be capable of hazard recognition, equipment use and techniques necessary to operate safely and effectively at trench and excavation emergencies. Including the collapse or failure of individual, non-intersecting trenches with an initial depth, prior to collapse, of 8 feet (2.44 meters) or less. (9.3.1)
- 48-2** Identify and implement procedures to make an entry into a trench / excavation rescue area. (9-3.3a)
- 48-3** Identify unstable areas associated with trench / excavation emergencies and adjacent structures. (9-3.3b)
- 48-4** Identify and implement procedures to identify probable victim locations and survivability. (9-3.3c)
- 48-5** Identify and implement procedures for making the rescue area safe, including the identification, construction, application, limitations and removal of sheeting and shoring using tabulated data and/or accepted shoring practices. (9-3.3d)
- 48-6** Identify procedures for interacting with a one-call utility locations service. (9-3.3e)
- 48-7** Identify soil types using accepted visual or manual tests. (9-3.3f)
- 48-8** Identify and implement procedures to monitor air quality and ventilate the trench or excavation space. (9-3.3g)
- 48-9** Identify a bell-bottom excavation pier hole and its associated hazards. (9-3.3h)
- 48-10** Identify and implement procedures for placing ground pads and protecting the lip of a trench or excavation with or without surface hazards present. (9-3.3i)
- 48-11** Identify and implement procedures to provide entry and egress paths for entry personnel. (9-3.3j)
- 48-12** Identify and implement procedures for setting-up a size up, pre-entry briefing and an Incident Command System for trench rescue. (9-3.3k)
- 48-13** Identify and implement procedures for record keeping and documentation during operations. (9-3.3l)
- 48-14** Identify and implement procedures for a rapid intervention team (RIT). (9-3.3m)
- 48-15** Identify general collapse mechanics and the effects on a trench / excavation. (9-3.1)

- 48-16** Identify procedures for the selection, utilization, and application of sloping and benching. (9-3.3o)
- 48-17** Identify procedures for the selection, utilization, and application of shield systems. (9-3.3n)
- 48-18** Identify procedures for the selection, utilization, and application of shoring systems. (9-3.3d, 9-3.3p)
- 48-19** Implement procedures for assessing the mechanism(s) of entrapment and method(s) of releasing a victim. (9-3.3q)
- 48-20** Identify and implement procedures for stabilizing and removing a victim from a trench / excavation. (9-3.3r)
- 48-21** **Given OSHA tables or Manufacturer's tabulated data, demonstrate the installation of each of the following:**
- A. Timber**
  - B. Pneumatic**
  - C. Hydraulic**
  - D. Other used by the Authority Having Jurisdiction**
- 48-22** **Participate as a team member in live trench scenario.**